

## Claims

1. A method for controlling the selection of base stations in a cellular radio telecommunications system with the following features:
- 5 a) In at least one radio cell (PC1, PC2) of the radio telecommunications system, at least one base station (FP11, FP21, FP22) and at least one radio device (PP, RNT) are operated for the purposes of wireless telecommunication,
  - 10 b) the radio device (RNT; PP) supports at least one first service (D1) and one second service (D2),
  - c) the radio device (RNT; PP) stores connection-relevant data in at least one memory (SP1, SP2),
  - 15 d) base stations (FP11, FP21, FP22) signal to the radio device (RNT, PP), in system information, which service (D1, D2) they support,
  - e) the radio device (RNT, PP) stores primary data records of the base stations (FP11, FP21, FP22) in the form of a first list (L1) in the memory (SP1, SP2), if the base stations (FP11, FP21, FP22) signal to the radio device (PP; RNT) in the system information that they support the first service (D1),
  - 20 f) the radio device (RNT, PP) stores secondary character sets of the base stations (FP11, FP21, FP22) in the form of a second list (L2), if the base stations (FP11, FP21, FP22) signal to the radio device (PP; RNT) in the system information that they support the second service (D2),
  - 25 g) the radio device (RNT, PP) updates the first list (L1) and/or the second list (L2) if the data of the base stations (FP11, FP21, FP22) are modified.
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5. The method as claimed in one of the previous claims, characterized in that

- a) the radio device (PP; RNT) reads out a first data record of the primary data records when it sets up a telecommunications connection to the base station (FP11, FP21, FP22) which supports the first service (D1),
- b) the radio device (PP; RNT) reads out a first data record of the secondary data records when it sets up a telecommunications connection to the base station (FP11, FP21, FP22) which supports the second service (D2),
- c) the radio device (RNT, PP), if the connection set-up fails, reads out a second data record of the primary or secondary data records in the relevant list (L1,

L2) and sets up a connection to the corresponding base station (FP11, FP21, FP22),

5 d) the radio device (RNT, PP), if no connection has yet been set up and the second data record was the last data record in the respective list (L1, L2), restarts the read-out of the first data record of the list (L1, L2).

10 6. The method as claimed in one of the previous claims, characterized in that

15 a) the radio device (PP; RNT) reads out a first data record of the primary data records when it sets up a telecommunications connection to the base station (FP11, FP21, FP22) which supports the first service (D1),

20 b) the radio device (PP; RNT) reads out a first data record of the secondary data records when it sets up a telecommunications connection to the base station (FP11, FP21, FP22) which supports the second service (D2),

25 c) the radio device (RNT, PP), if the connection set-up fails, reads out a second data record of the primary or secondary data records in the relevant list (L1, L2) and sets up a connection to the corresponding base station (FP11, FP21, FP22),

30 d) the radio device (RNT, PP), if no connection has yet been set up and the second data record was the last data record in the respective list (L1, L2), restarts the read-out of the first data record of the respective list (L1, L2) at the end of a predefined pause time.

7. The method as claimed in one of the previous claims, characterized in that

35 the radio device (RNT, PP) is a radio network termination RNT.

8. The method as claimed in one of the previous claims,  
characterized in that,  
in the case of a plurality of radio cells in the radio  
telecommunications system, the same radio ranges are  
5 allocated to the radio cells.

9. The method as claimed in claim 8,  
characterized in that  
the radio telecommunications system operates according  
10 to the DECT standard.

10. The method as claimed in one of claims 1 to 7,  
characterized in that,  
in the case of a plurality of radio cells in the radio  
15 telecommunications system, different radio ranges are  
allocated to the radio cells.

11. The method as claimed in claim 10,  
characterized in that  
20 the radio telecommunications system operates according  
to the UMTS standard.

12. The method as claimed in claim 10 or 11,  
characterized in that  
25 a) the same type of data is transmitted in the first  
service (D1) and in the second service (D2),  
b) the first service and the second service are made  
available in different radio cells.

30 13. The method as claimed in one of claims 1 to 11,  
characterized in that  
different types of data are transmitted in the first  
service (D1) and in the second service (D2).

14. The method as claimed in claim 13,  
characterized in that  
signals with a transmission rate of 32 kbit/s are  
transmitted in the first service (D1), and signals with  
5 a transmission rate of 64 kbit/s are transmitted in the  
second service (D2).

15. The method as claimed in claim 13 or 14,  
characterized in that  
10 voice is transmitted in the first service (D1), and  
packet data are transmitted in the second service (D2).